Draft 2/27/2019

STATEMENT OF BASIS

FOR THE ISSUANCE OF
A NPDES PERMIT

U.S. Environmental Protection Agency
Region 5, NPDES Programs Branch - WN-15J
77 West Jackson Boulevard
Chicago, Illinois 60604
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Public Notice No.: Draft

Public Notice Issued On: Draft

Comment Period Ends: Draft

Permit No.: WI-0036579-5 (REISSUANCE)

Application No.: WI-0036579-5

Name and Address of Applicant:

Bad River Utilities
Bad River Band of the Lake Superior
Tribe of Chippewa Indians
P.O. Box 39
Odanah, Wisconsin 54861

Name and Address of Facility Where Discharge Occurs:

Birch Hill Stabilization Lagoon
Bad River Indian Reservation
Birch Hill, Wisconsin
Ashland County
(NW ¼ of NE ¼ Sec. 36, T47N, R2W)

Receiving Water: Birch Hill Swamp

DESCRIPTION OF APPLICANT'S FACILITY AND DISCHARGE

The above facility is located within the boundaries of the Bad River Indian Reservation. The EPA has retained the authority to issue NPDES permits to facilities with discharges to waters of the United States within the boundaries of Indian Reservations. The EPA is issuing this NPDES permit under the authorities of the Clean Water Act.

The existing treatment facility consists of 2-cell stabilization lagoon, the primary cell being 2.31 acres in area and the secondary cell being 2.30 acres in area measured at the mean operating level. It has an average design flow of 22,000 gallons per day. The discharge is controlled, usually occurring during the spring and fall to Birch Hill Swamp.

Section 401 Water Quality Certification

Where states or tribes have federally approved water quality standards that are applicable at the point of discharge, federal NPDES permits cannot be issued unless water quality certification for the discharge is granted or waived pursuant to Section 401 of the Clean Water Act. The tribal

Section 401 authority within the Bad River Band is the Tribal Council. The permittee has provided a copy of its NPDES permit application and requested Section 401 certification from the Bad River Band. EPA has provided a copy of the draft NPDES permit to the Council. If the Council needs any additional information in order for the Section 401 application to be considered complete, the Council will request such information from the permittee. It is the permittee's responsibility to ensure that the Council has received a valid, complete application for tribal Section 401 certification and to obtain a final Section 401 action from the Council.

ESA and NHPA Compliance

EPA believes it has satisfied its requirements under the Endangered Species Act. This is an existing facility that has previously been permitted by EPA. We reviewed the USFWS website for threatened and endangered species and their critical habitat listed within Ashland County. The site identified the Gray wolf and Piping plover as endangered species and the Canada lynx, Northern long-eared bat and Rufa red knot as threatened species. This facility has been in existence for many years and no new construction is planned. The discharges from the above facilities have been treated and should have no effect on any of the species or the species' critical habitat, especially for the Canada lynx, the Gray wolf, the Northern long-eared bat and the Rufa red knot (see https://ebird.org/map: no sightings in area of discharges). Regarding the Piping plover, it can be found along the Lake Superior shoreline. Specific critical habitat has been identified along the shoreline of the Bad River Reservation, however, the facility and discharge are outside the critical habitat and should not adversely affect the plover or its critical habitat.

EPA believes it has satisfied its requirements under the National Historical Preservation Act. This is an existing facility that has previously been permitted by EPA. We do not have any records indicating any historical properties being in the area of potential effect (the existing site and discharge location). Also, no construction is planned at the site during the permit term. Therefore, we believe that no historic or archeological sites or cultural resources will be affected by the continued operation of the facility and its discharge with the reissuance of the permit.

Receiving Water

Birch Hill Swamp is protected under Bad River Band's Water Quality Standards (WQS) within the exterior boundaries of the Bad River Indian Reservation. It is classified as a wetland (W3) which is protected and maintained for at least some of the following uses: maintaining biological diversity, preserving wildlife habitat, providing recreational activities, erosion control, groundwater recharge, low flow augmentation, storm water retention, prevention of stream sedimentation, and the propagation of wild rice.

Proposed Effluent Limitations:

Monitoring Point 001- the permittee is authorized to discharge of treated municipal wastewater from Monitoring Point 001 through Outfall 010, which discharges to the Hanson Swamp.

Effluent Characteristics	Discharge Limitations						
	Concentration (Specified Units)				Quantity/Loading (lbs/day)		
Parameter	Minimum	Monthly	Weekly	Maximum	Monthly	Weekly	Maximum
Flow (MGD)	-	-	-	-	Report	Report	-
Dissolved Oxygen (mg/L)	4.0	-	-	-	-	-	-
pH (SU)	6.0	-	-	9.0	-	-	-
Total Suspended Solids (TSS) (mg/L)	-	60	90	-	186	278	-
Biochemical Oxygen Demand (BOD_5) (mg/L)	-	30	45	-	93	139	-
Phosphorus, Total (mg/L)	-	Report	-	Report	-	-	-
Ammonia Nitrogen (mg/L)	-	Report	-	Report	-	-	-
Sulfates (mg/L)	-	Report	-	Report	-	-	-
E. coli (#/100ml)	-	126*	-	235	-	-	-
BOD_5 percent removal (%)	85	-	-	-	-	-	-
TSS percent removal (%)	65	-	-	-	-	-	-
Outfall observation (yes/no)	-	-	-	-	Report	-	-

* Geometric Mean

Discharge is limited to a maximum 6 inches per day. Discharge flow was calculated as follows

2.30 acres x 0.5 feet/day (6 inches/day) x 325,900 gallons per acre-ft ≈ 0.37 million gallons/day.

Loading limits in the permit were calculated using the following formula:

0.37 mgd x limit (mg/L) x 8.34 = Loading (lbs/d).

Basis for Permit Requirements

The limits were developed to ensure compliance with 40 CFR Parts 131 and 133, Bad River's water quality standards, and protection of Wisconsin's water quality standards where they are applicable.

pH
The limits for pH are based on secondary treatment requirements pursuant to 40 CFR Part 133.

Biochemical Oxygen Demand(BOD)
The limits for BOD are based on secondary treatment requirements pursuant to 40 CFR Part 133. A 7-day average limit of 45 mg/L and a 30-day average limit of 30 mg/L are carried from the previous permit; these are the arithmetic mean of pollutant parameter values for samples collected in a period of 7 and 30 consecutive days, respectively.

Total Suspended Solids (TSS)
The limits for TSS are based on secondary treatment requirements pursuant to 40 CFR Part 133. A 7-day average limit of 90 mg/L and a 30-day average limit of 60 mg/L are carried from the previous permit; these are the arithmetic mean of pollutant parameter values for samples collected in a period of 7 and 30 consecutive days, respectively.

E. coli
The limits for E. coli are based on Bad River's water quality criteria. The geometric mean of not less than 5 samples equally spaced over a 30-day period shall not exceed an E. coli count of 126 Colony Forming Units (CFU) per 100 milliliters (ml). Any single sample shall not exceed an E. coli count of 235 CFU per 100 ml.

Mercury
The previous permit required monitoring for mercury during the permit term to help determine whether the permittee can meet Bad River's Acute Aquatic Life water quality standard of 1440 ng/L. A Pollutant Minimization Program (PMP) for mercury was also included in the permit to help identify possible sources of mercury in the system. Sampling results for mercury obtained during the previous permit term indicates that the effluent is well below the above standard. The average of the daily maximum values during the previous permit term was 4.6 ng/L with the highest daily maximum being 11 ng/L. The effluent has no reasonable potential to violate the above standard and therefore, the permit will no longer require mercury monitoring or implementation of the PMP. It is recommended that the permittee continue to identify potential sources of mercury to help ensure mercury effluent values do not increase.

Phosphorus
According to the Bad River Band's Environmental staff, the receiving waters are not impaired for phosphorus at the point of discharge. In addition, the Bad River Band's water quality regulations and Wisconsin's water quality standards for phosphorus are not applicable in wetlands. However, there is still concern related to excessive phosphorus loads being discharged to waters of the U.S. and its effects in downstream waters. The previous permit required monitoring to determine levels being discharged. Based on sampling data submitted, the average of the daily maximum effluent values was 3.1 mg/L with a maximum daily value of 6 mg/L and the average of the monthly average values was 2.7 mg/L with a maximum monthly value of 4.7 mg/L. Due to the seasonal nature and short duration of the discharge, we do not believe this constitutes an excessive load and

therefore no limits have been included in the permit. The permit will however, still require monitoring and submittal of a Phosphorus Operational Evaluation Report which will help in identifying ways to further reduce phosphorus levels. This information will be used to determine if limits are needed in future permits.

Dissolve Oxygen
A minimum dissolved oxygen discharge limit of 4.0 mg/L, is included in the permit based on the Bad River Band's WQS.

Sulfates
The WQS for the Bad River Band do not have numeric standards for sulfates. Monitoring is required to provide information related to sulfate levels being discharged from wastewater treatment ponds and the possible impacts to wild rice waters. The data will be used to help the Bad River Band develop numeric standards if determined necessary to protect wild rice waters. Since the discharge does not appear to adversely affect the receiving water's designated uses, development of limits based on the Band's narrative criteria is not needed at this time. A reopener clause is included in the permit to possibly modify the permit if numeric standards are developed.

Ammonia Nitrogen
The previous permit required monitoring to provide information related to ammonia nitrogen levels being discharged from the wastewater treatment pond. Based on sampling data submitted, the average of the daily maximum effluent values was 15 mg/L with a maximum daily value of 33.7 mg/L and the average of the monthly average values was 12 mg/L with a maximum monthly value of 26 mg/L. Due to the seasonal nature and short duration of the discharge, higher stream flows and low effluent pH (6.9 average), we do not believe the effluent has a reasonable potential to violate Bad River's water quality standards and therefore no limits have been included in the permit. The permit will still require monitoring for ammonia. This information will be used to determine if limits are needed in future permits. The reopener clause from the previous permit has been removed.

Asset Management
Regulations regarding proper operation and maintenance are found at 40 CFR § 122.41(e). These regulations require, "that the permittee shall at all times operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit." The treatment plant and the collection system are included in the definition of "facilities and systems of treatment and control" and are therefore subject to the proper operation and maintenance requirements of 40 CFR § 122.41(e).

Similarly, a permittee has a "duty to mitigate" pursuant to 40 CFR §122.41(d), which requires the permittee to "take all reasonable steps to minimize or prevent any discharge in violation of the permit which has a reasonable likelihood of adversely affecting human health or the environment."

The draft permit requirements are the first steps of an asset management program which contains goals of effective performance, adequate funding, adequate operator staffing and training. Asset management is a planning process that ensures that you get the most value from each of your assets and have the financial resources to rehabilitate and replace them when necessary, and typically includes five core elements which identify: 1) the current state of the asset; 2) the desired level of service (e.g., per the permit, or for the customer); 3) the most critical asset(s) to sustain performance; 4) the best life cycle cost; and 5) the long term funding strategy to sustain service and performance.

EPA believes that requiring a certified wastewater operator and adequate staffing will help to ensure that the facilities and systems of treatment and control will be properly operated and maintained. Mapping the system service area will help the operator get a better handle on the assets that he/she is responsible for and the resources needed to properly operate and maintain them. This will help in the development of a budget and a user rate structure that is necessary to sustain the operation, maintenance and repair of the system. Requiring the development and implementation of a preventive maintenance program is one reasonable step that the permittee can take to minimize or prevent a discharge in violation of the permit.

Special Conditions

- The permit requires electronic reporting.
- Dikes must be maintained and vegetation cut.
- The permit requires the continued implementation of an Operation & Maintenance Plan. The plan covers the use of a certified operator to oversee the facility, having adequate staff to help ensure compliance with the permit, mapping the treatment system, developing a preventive maintenance program and other items.
- The permit contains Industrial Waste Pretreatment Program requirements in accordance with 40 CFR Parts 122 and 403.
- Compliance with 40 CFR Part 503 (sludge use and disposal regulations). These requirements were developed using the Part 503 Implementation Guidance for sludge and 40 CFR Parts 122, 501, and 503. It is not expected that any sludge will be used or disposed of during this permit term. EPA is to be contacted if sewage sludge is to be removed from the pond system.
- The permit requires the submittal of a Phosphorus Operational Evaluation Report annually.

Significant Changes

Following are the significant changes in the draft permit:

- Monitoring for mercury in the influent and effluent has been removed as well as has the Pollutant Minimization Program (PMP) for mercury.
- The Reporting requirement has been changed to require electronic submittal of DMRs. (Part I.E.2)
- Additional requirements related to Asset Management have been added. (Part I.E.5)
- The permit requires the submittal of a Phosphorus Operational Evaluation Report annually. (Part I.E.9)

- The ammonia reopener clause has been removed.

The permit is based on applications dated May 4, 2018, and additional supporting documents found in the administrative record.

The permit can be effective for five years from the date of reissuance as allowed by 40 CFR 122.46.

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February 2019